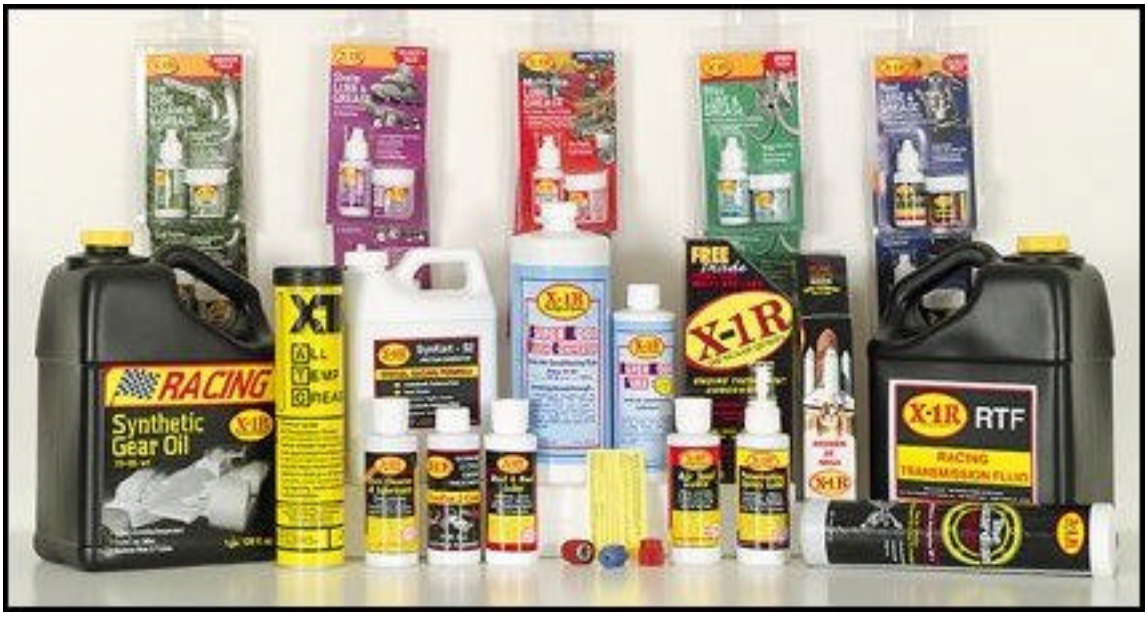
NASA Success Story

X-1R Advanced Lubricant



Sun Coast Chemicals of Daytona, Inc. (SCCD) is commercializing multiple products based on a biodegradable, non-toxic lubricant it originally developed to replace the Space Shuttle Crawler's standard lubricant. The X-1R Crawler Track Lubricant (CTL) led to an industrial product line of 19 separate specialty lubricants. The first three industrial products were: Train Track Lube, used to solve wear problems for the Florida Power Corporation's railroad system; Penetrating Spray Lube (PSL), used in applications where spray lubrication was needed for rust prevention; and Biodegradable Hydraulic Fluid (BHF), which has an oxidation life of 10,000 hours. BHF is being sold through Motion Industries, the largest industrial maintenance and equipment supplier in the U.S., to Dupont Corporation, Kitchens of the Ocean processing plant, as well as the sugar, agricultural, pulp and paper, forestry and sawmill, marine, mining, and heavy construction industries. SCCD's newer retail product line has targeted the sports market, providing lubricants for gun cleaning, skates, air tools, fishing reels, bicyles, and an air conditioning retrofit kit. These spinoff products have been sold in retail stores nationwide. SCCD is also negotiating with the television home shopping network QVC to market their products. In addition, the company is expanding into a marine line of products for boats, new products for racing cars, motorcycles, and go-carts, along with a multi-use handy pack. SCCD was founded in 1989 and established its reputation with its first product, X-1R Concentrate Friction Eliminator, developed for the NASCAR racing circuit, to protect engines and transmissions from heat and wear damage.

NASA Involvement NASA at Kennedy Space Center contacted SCCD through its Shuttle processing contractor, Lockheed Martin Space Operations, in 1994 to help their preventive

Point of Contact
Edwin Longo, Executive Director
Sun Coast Chemicals Of Daytona, Inc.
375 Fentress Blvd.
Daytona Beach, FL 32114

Phone: (800) 747-4917 x304
Fax: (904) 271-7001
et@x1r.com

Prepared by Dynacs Eng. Co., Inc.
Success Story ID # 1989
June 2000

NASA Success Story

X-1R Advanced Lubricant (Continued)

maintenance group develop a more environmentally-friendly lubricant for the six-million-pound crawler/transporter used to move the Space Shuttle and mobile launch platform from the Vehicle Assembly Building to the launch pad. Working in cooperation, NASA and SCCD developed the CTL in eight months. Infrared thermography testing on the crawler revealed that the X-1R CTL lubricant brought the significant wear and heat reduction results NASA was looking for. The formulation passed all NASA tests, met all Environmental Protection Agency requirements, and has since become a major part of the Crawler Preventive Maintenance program at KSC.

Social/Economic Benefit Major benefits are received from the X-1R family of products due to its friendly impact on the environment. Since working with NASA, SCCD redirected their research and development program towards designing safer, more efficient, environmentally-safe retail markets for the fishing, hunting, and bicycling enthusiasts. The company has also targeted lubricant arenas that have a powerful destructive effect on the environment, and have accepted the challenge of finding solutions through its safer lubricants. Kennedy Space Center benefited from the product's features that help protect delicate Florida marshlands and endangered wildlife. Racecar drivers, motorists, sportsmen, bicylists, and consumers benefit from the company's continual product improvement. The X-1R lubricant was validated in testing with Q.C. Laboratories. Tests showed the product actually impregnates 3 to 5 microns deep into the open pores of the metal's surface, which increases the density of the metal's surface making it harder and smoother, yet keeping it lubricity intact. The company has achieved explosive success in a short time and now has distribution networks worldwide. SCCD had a 1998 retail sales in excess of $1 million, and expects a strong continuing growth, with forecasts of $4 million this year and $11 million in 2000.

Industry Partner
Sun Coast Chemicals Of Daytona, Inc.

NASA Partner
Kennedy Space Center

Point of Contact
Edwin Longo, Executive Director
Sun Coast Chemicals Of Daytona, Inc.
375 Fentress Blvd.
Daytona Beach, FL 32114

Phone: (800) 747-4917 x304
Fax: (904) 271-7001
et@x1r.com

Prepared by Dynacs Eng. Co., Inc.
Success Story ID # 1989
June 2000